

Ramsar National Report to COP13

Section 1: Institutional Information

Important note: the responses below will be considered by the Ramsar Secretariat as the definitive list of your focal points, and will be used to update the information it holds. The Secretariat's current information about your focal points is available at <http://www.ramsar.org/search-contact>.

Name of Contracting Party

The completed National Report **must be accompanied by a letter** in the name of the Head of Administrative Authority, confirming that this is the Contracting Party's official submission of its COP13 National Report. It can be attached to this question using the "Manage documents" function (blue symbol below)

> Jamaica

You have attached the following documents to this answer.

[Letter regarding submission of National Report to COP13 Jamaica January 2018.pdf](#)

Designated Ramsar Administrative Authority

Name of Administrative Authority

> National Environment and Planning Agency

Head of Administrative Authority - name and title

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Designated National Focal Point for Ramsar Convention Matters

Name and title

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Designated National Focal Point for Matters Relating to The Scientific and Technical Review Panel (STRP)

Name and title

> Mr. Keron Campbell, Botanist

Name of organisation

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Designated Government National Focal Point for Matters Relating to The Programme on Communication, Education, Participation and Awareness (CEPA)

Name and title

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Designated Non-Government National Focal Point for Matters Relating to The Programme on Communication, Education, Participation and Awareness (CEPA)

Name and title

> Miss Ingrid Parchment, Executive Director

Name of organisation

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Section 2: General summary of national implementation progress and challenges

In your country, in the past triennium (i.e., since COP12 reporting)

A. What have been the five most successful aspects of implementation of the Convention?

1)

> 1) Communication, Education, Participation and Awareness (CEPA) Programme

The GOJ through the Administrative Authority (AA) and in collaboration with a wide cross section of stakeholders in civil and non-governmental organizations (NGOs) as well as commercial interests were very actively involved in activities under the CEPA program. These activities had as their highlight the annual commemoration of World Wetlands Day (WWD) and for which reports have been prepared and submitted for each year of the triennium.

In Jamaica, multi-stakeholder cooperation is critical in driving the CEPA efforts, especially WWD, and efforts are supported by other governmental organisations, NGOs, community based organizations (CBOs), community development committees (CDCs), cultural groups and the media. These campaigns are always executed under the annual themes highlighted by the Convention and target audiences including but not limited to resource users, community members, churches, NGOs, schools, informal groups and the wider society. The activities undertaken islandwide included community meetings, radio and television interviews, church services and notices, school and summer camp presentations, boat tours through Ramsar sites, mass media campaigns, mangrove replanting, exhibitions, debate competitions amongst secondary school students and use of social media such as updates on twitter and facebook as well as prominent placements on NEPA's website.

2)

> 2) The GoJ has received funding from the World Bank Program on Forests (PROFOR) to implement the project titled "Assessment and Economic Valuation of Coastal Protection Services Provided by Mangroves in Jamaica". The project is linked to larger ongoing Jamaica Disaster Vulnerability Reduction Project (DVRP) also funded by the World Bank, which focuses on enhancing the climate and disaster resilience of key infrastructure and the country's disaster response capacity. The PROFOR Project will be supervised by the World Bank, and led at the local level by the National Environment and Planning Agency (NEPA) of Jamaica.

This project will mainly consist of field data collection and analytical work specifically targeted on four strategic areas that have been identified as current knowledge gaps:

i. Habitat Status Assessment: Acquire physical measures to assess the current geo-ecological status of mangroves in different coastal settings and to use this to analyze the natural capital involved in the provision of coastal protection in Jamaica.

ii. Coastal Protection Ecosystem Services Assessment: Collect physical and socio-economic data in each coastal setting, and to use this to assess the current provision of ecosystem services related coastal protection by mangroves, and further calculate the hazard reduction by this ecosystem. Based on this calculations an economic value on these coastal protection services will be estimated (i.e. avoided losses: human lives, infrastructure damages, tourism economic loss, income loss, livelihoods).

iii. Habitat Risk Assessment: Integrate data the "Habitat Status Assessment" and the "Coastal Protection Ecosystem Services Assessment" so as to undertake a "Habitat Risk Assessment". This will be used to assess the risk posed to mangrove habitats by human activities and the potential consequences of exposure for the delivery of ecosystem services related to coastal protection.

iv. Cost-effectiveness Assessment: Review of secondary data on costs of hard infrastructure in coastal settings and use this information for a cost-effectiveness analysis on multiple locations showing different coastal protection measures including hard infrastructure (seawalls, breakwaters etc), nature-based infrastructure (mangrove replanting and conservation), and hybrid measures (a combination of hard and green). This cost-effectiveness analysis will be done for existing mangrove patches, and potential restoration or replanting scenarios.

The project will be carried out at Portland Cottage (within the Portland Bight Wetland and Cays) as well as the Salt Marsh and Bogue wetlands.

3)

> 3) 'Strengthening the Operational and Financial Sustainability of the National Protected Area System' Project (NPAS).

The project entitled 'Strengthening the Operational and Financial Sustainability of the National Protected Area System (NPAS)' was implemented by NEPA. Various activities under the project were implemented by other governmental agencies such as NEPA, Forestry Department, Jamaica National Heritage Trust and the Fisheries Division who all manage protected areas. This NPAS project aimed to consolidate the operational and financial sustainability of Jamaica's national protected areas system, including all areas designated as Ramsar sites. The objective was achieved through three components: (1) Strengthening of financial planning and revenue generation (2) Rationalizing and integrating the NPAS (3) Increasing the effectiveness of protected area

management.

One component of the project resulted in the development of management plans for eight protected areas inclusive of the following wetland areas: Mason River Protected Area, Bird Sanctuary and Ramsar Site (MRPABS&RS), Ocho Rios Marine Park Protected Area (ORMP-PA), PPRPA&RS, Black River, the Discovery Bay Special Fishery Conservation Area and the Pedro Banks. The plans listed are all at differing stages of development.

NEPA has developed zoning plans for the NMP and the Montego Bay Marine Park (MBMP). The zoning plans are in place for The Coral Spring/Mountain Spring Protected Area and the PPRPA&RS.

4)

> 4) Work under the NPAS Project supported the work being undertaken by NEPA towards the designation of Jamaica's first Ramsar site, the Black River Lower Morass Ramsar Site (BRLMRS), as a protected area under local legislation. This will increase the amount of protection for this very important area and will result in the finalization and implementation of a Management Plan for the area. It should however be noted that while this work is being done the NEPA has stepped up efforts to monitor and enforce in order to facilitate enhanced protection for the BRLMRS through stakeholder engagement and research. Findings of the research conducted is represented in the following publications.

i. Report on Biodiversity Data and Information on Black River Based on Rapid Ecological Assessment Inclusive of Analysis Conducted on Biodiversity Monitoring Data to Provide Secondary Data on Target Areas and Species & Report on the Review of Boundaries for the Proposed Black River Protected Area, Making Relevant Recommendations and, Identifying Any Gaps in the Ecological Data for the Proposed Area.

ii. Black River Protected Landscape Management Plan 2017-2022.

iii. Carrying Capacity Report for Black River and its Tributaries Final Report.

5)

> 5) Jamaica continues to strengthen its system of marine protected areas through the added designation under the Fisheries Laws as Special Fishery Conservation Areas (SFCAs) which are no-fishing zones reserved for the reproduction of fish populations. There are now 14 such declared marine protected areas, three of which are within the Portland Bight Protected Area and Ramsar Site. It should be noted that this additional designation also results in increased resource allocations becoming available to enhance management, monitoring and enforcement.

A national baseline survey of most of the existing SFCA is ongoing islandwide. This survey is being conducted using a modified Atlantic and Gulf Rapid Reef Assessment (AGRRA) survey protocol. Survey sites are also be established to inform the declaration of additional SFCAs within the Portland Bight Protected Area including the Ramsar Site.

B. What have been the five greatest difficulties in implementing the Convention?

1)

> 1) Management of Ramsar Sites

The capacity to develop, implement and finalize mechanisms (management plans, zoning plans, financial sustainability plans etc.) for the management of designated Ramsar sites is recognized as the greatest challenge in implementing the Convention.

2)

> 2) Partnerships

Forging and maintaining public/civic/private partnerships towards the management of Ramsar sites and other wetland areas currently being impacted by development.

3)

> 3) Policies and Legislation

Over the last triennium the Protected Areas System Master Plan 2013 - 2017 was implemented. Currently a report is being generated on the implementation of the Plan.

4)

> 4) Socio-economic Realities

The exploitation of natural resources for economic benefit continues to threaten the conservation of these systems. This has been a pervasive problem and remains an issue to be addressed. Development Pressure. The recessionary nature of the global economic climate continues to exacerbate the need for development to foster economic growth in Jamaica. As a consequence there has been increased pressure in particular to the coastal environment. There are several major projects which arise which continues the conflict between the Government and the NGO community; the conflict surrounded the modification of nearshore resources.

5)

> 5) Sustainable financing

There is the challenge of mobilizing and managing funds to address a range of challenges associated with

biodiversity conservation and protected area management. This impacts how successful the NEPA is able to implement the various management and zoning plans for the protected areas system including its Ramsar sites. Securing adequate funds is a necessary but not sufficient condition for protected areas to be managed effectively and financed sustainably. With this in mind one of the goals of the NPAS project was the development of the National Conservation Trust Fund of Jamaica (NCTFJ) Ltd. This was established in December 2014 under the Companies Act of Jamaica. The objective of the NCTFJ is to promote for the benefit of the public the conservation, protection, management and expansion of Jamaica's national Protected Areas System by providing a sustainable flow of funds to support, without limitation, enforcement, infrastructure, monitoring needs and other activities that contribute substantially to the conservation, protection and maintenance of biodiversity within the National Protected Areas System or any other area of environmental significance of Jamaica.

C. What are the five priorities for future implementation of the Convention?

- 1)
 - > 1) Finalization of the Draft Overarching Policy for Jamaica's System of Protected Areas.
- 2)
 - > 2) Developing a framework for the monitoring and evaluation of national targets (including targets relating to wetland conservation) outlined in the country's National Strategy and Action Plan on Biological Diversity in Jamaica 2016-2021 (NBSAP).
- 3)
 - > 3) Implementation of Management Plans for various protected area and by extension Ramsar sites.
- 4)
 - > 4) Designation of the Black River Lower Morass as a protected area under the Natural Resources Conservation Act in line with the protected area framework under which all other Ramsar sites fall.
- 5)
 - > 5) Further expansion of Ramsar site network in Jamaica with the possible submission of the Negril Area and Falmouth wetlands Ramsar Information Sheets to the Ramsar Secretariat for consideration.

D. Do you (AA) have any recommendations concerning implementation assistance from the Ramsar Secretariat?

> In light of the threat that is posed to the majority of the Ramsar sites in the Small Island Developing States (SIDS), and in specific reference to Climate Change, The Secretariat should seek to prioritize the funding of research, training and programmes in the region in order to address the process of Climate Change Adaptation. Projects should be developed on a regional scale and seek to focus on regional challenges.

E. Do you (AA) have any recommendations concerning implementation assistance from the Convention's International Organisation Partners (IOPs)? (including ongoing partnerships and partnerships to develop)

> The expansion of the geographic focus of the IOPs to include underserved regions (such as the Caribbean) should be made a priority.

F. How can national implementation of the Ramsar Convention be better linked with implementation of other multilateral environmental agreements (MEAs), especially those in the 'biodiversity cluster' (Convention on Biological Diversity (CBD), Convention on Migratory Species (CMS), Convention on International Trade in Endangered Species (CITES), World Heritage Convention (WHC), and United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC)?

> Jamaica reaffirms its position that efforts should harmonize the formats for national reports that will facilitate better implementation, reduce overlap and promote more efficient use of scarce resources available to the Parties.

The MOUs already established between MEAs should be evaluated to determine their effectiveness and where possible additional linkages are encouraged. This evaluation should be conducted to evaluate MEA's contribution in resolving the challenges faced by countries in the region.

G. How can implementation of the Ramsar Convention be better linked with the implementation of water policy/strategy and other strategies in the country (e.g., on sustainable development, energy, extractive industries, poverty reduction, sanitation, food security, biodiversity)?

> Vision 2030: Jamaica - National Development Plan, is the long-term sustainable development framework for the country. Wetland considerations are continuously incorporated in the medium-term socio-economic framework (MTF) that guide its implementation. Furthermore, the commitments made under other MEAs are included in the MTF as priority activities. The design of each MTF (3-year cycles) is consultative and cross-

cutting so as to reduce duplication and maximise on synergies.

National Targets. The Report outlines the planned targets and the activities to be undertaken to achieve said targets.

H. Do you (AA) have any other general comments on the implementation of the Convention?

> Jamaica reaffirms its commitment to the implementation of the project entitled "Wise Use of Caribbean Wetlands for Climate Change Mitigation and Conservation of their Ecosystem Services" submitted by the Secretariat of the Ramsar Convention on Wetlands to the International Climate Initiative (IKI). The project will provide assistance to Contracting Parties in the region on key issues such as climate change and ecosystems services in the Caribbean region to enhance the implementation of the Strategic Plan of the Convention, the Strategic Plan for Biodiversity and the United Nations Framework Convention on Climate Change (UNFCCC). The support of the Secretariat will be critical for the successful implementation of the project as there is currently a challenge in identifying an alternate sustainable mechanism for the implementation of the Convention across the region.

I. Please list the names of the organisations which have been consulted on or have contributed to the information provided in this report

> National Environment and Planning Agency (NEPA)

Natural History Museum of Jamaica, Institute of Jamaica (NHMJ-IOJ)

Environmental Risk Management Division, Ministry of Economic Growth & Job Creation

Forestry Department

Section 3: Indicator questions and further implementation information

Goal 1. Addressing the drivers of wetland loss and degradation

Target 1

Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level.

1.1 Have wetland issues/benefits been incorporated into other national strategies and planning processes, including: {1.3.2} {1.3.3} KRA 1.3.i

Please select only one per square.

a) National Policy or strategy for wetland management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
b) Poverty eradication strategies	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
c) Water resource management and water efficiency plans	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
d) Coastal and marine resource management plans	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
e) Integrated Coastal Zone Management Plan	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
f) National forest programmes	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
g) National policies or measures on agriculture	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
h) National Biodiversity Strategy and Action Plans drawn up under the CBD	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
i) National policies on energy and mining	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

j) National policies on tourism	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
k) National policies on urban development	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
l) National policies on infrastructure	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
m) National policies on industry	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
n) National policies on aquaculture and fisheries {1.3.3} KRA 1.3.i	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
o) National plans of actions (NPAs) for pollution control and management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
p) National policies on wastewater management and water quality	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

1.1 Additional information

> The points outlined above are addressed in Vision: 2030 Jamaica - National Development Plan, that is being implemented by all Government Agencies. Aspects of the Vision 2030 addressing sustainable development and environmental management are incorporated in the operational plan of the relevant agencies. Additional Government Agencies such as the Forestry Department and Fisheries Department develop and implement plans towards the protection of the forest areas inclusive of mangrove forests and SFCAs, some of which are within Ramsar Sites respectively.

In order to complete this National Strategy and Action Plan on Biological Diversity in Jamaica 2016-2021 in fulfilments of its obligations as a Party to the Convention on Biological Diversity, cross sectoral consultations were used to inform the document. The document outlines strategies for mainstreaming biodiversity (including wetland related issues) into policy documents, plans, actions, budget, legislation and indicators for key sectors such as agriculture, fisheries, forestry, mining, energy, tourism, transport and others. It also seeks to outline the national activities that will enable Jamaica to achieve the established Aichi Biodiversity Targets. (Source: National Strategy and Action Plan on Biological Diversity in Jamaica 2016-2021).

The National Environment and Planning Agency prepares Development Orders on behalf of the Town and Country Planning Authority. A Development Order is a legal document which is used to guide development in the area to which it applies. It enables the Local Planning Authority and/or the Town and Country Planning Authority to regulate land developments within the area securing proper conditions and conveniences and the co-ordination of roads and public services, protection and extension of amenities and the conservation of the resources of the area (including wetlands). (Source NEPA's website, 2017).

A draft Water Sector Policy has been developed and is being refined based on consultations with stakeholders. The policy articulates watershed management as a major strategy (including for floodwater control) and will elaborate aspects related to wetland conservation and rehabilitation as a means of ensuring water management, availability and security.

Target 2

Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone

2.1 Has the quantity and quality of water available to, and required by, wetlands been assessed to support the implementation of the Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1, VIII.2) ? 1.24.

B=No

2.2 Have assessments of environmental flow been undertaken in relation to mitigation of impacts on the ecological character of wetlands (Action r3.4.iv)

A=Yes

2.2 Additional Information

> The Permits and Licences System (P&LS) instituted by the GOJ governs the granting of licences for developments in the country. One such component of the P&LS incorporates an assessment to determine the applicability of the Environment Impact Assessment (EIA) tool as part of the decision-making process. Each development is evaluated against the rules governing the EIA assessment tool to determine whether the magnitude and the potential impacts of the project requires an EIA or in some cases an Environmental Impact Statement (EIS) or an Rapid Ecological Assessment (REA).

2.3 Have Ramsar Sites improved the sustainability of water use in the context of ecosystem requirements?

C=Partially

2.3 Additional Information

> Works has been done within the Black River Lower Morass as it relates to the carrying capacity of the river and its tributary as well as the boundary description to inform the declaration of the area as a protected area. This will be used to inform conservation targets in the area and in the development of the Management Plan.

2.4 Have the Guidelines for allocation and management of water for maintaining ecological functions of wetlands (Resolutions VIII.1 and XII.12) been used/applied in decision-making processes. (Action 3.4.6.)

C=Partially

2.5 Have projects that promote and demonstrate good practice in water allocation and management for maintaining the ecological functions of wetlands been developed (Action r3.4.ix.)

C=Partially

2.5 Additional Information

> In response to Vision 2030 Jamaica, the Government of Jamaica has highlighted the importance of all water infrastructure at the national level by producing a new Draft Water Sector Policy (published February 2014) and Implementation Plan. The policy maintains its key commitments, in particular, access for all to the country's freshwater and sanitation services, but includes new commitments to establishing integrated water resources management (IWRM) and incorporating adaptation to the effects of climate variability and change in the interests of strengthening resilience in the sector. (Source: SOE, 2013).

2.6 How many household/municipalities are linked to sewage system? SDG Target 6.3.1.

E=Exact number (households/municipalities)

> 700,000 individuals

2.6 Additional Information

> The national average sewage generation has been put at about 455 million litres per day (100 MGD). Of this about 25 percent is collected and treated in established treatment systems and the remainder disposed of by way of on-site disposal systems (pit latrines, soak-aways, septic tanks, etc.) (Source NEPA).

2.7 What is the percentage of sewerage coverage in the country? SDG Target 6.3.1.

E=Exact number (percentage)

> 30%

2.7 Additional Information

> In 2013 K-Factor tariff was introduced in utility bills to alleviate the capital-intensive endeavour of managing Jamaica's wastewater sector. The K-Factor — which for 2014-2018 is a 14% charge issued monthly to each customer — is used to offset the costs associated with the provision of water services, including the maintenance and improvement of wastewater treatment plants and sewerage services. Revenue generated from the K-Factor is placed in a reserve bank account as collateral for loans taken from financial institutions for funding the implementation of different wastewater management projects.

2.8 What is the percentage of users of septic tank/pit latrine? SDG Target 6.3.1.

E=Exact number (percentage)

> 75%

2.8 Additional Information

> Government will develop a comprehensive policy and regulatory framework for management of waste. In this regard, Government will address the fragmented approach of several agencies having responsibility for various aspects of waste management. Specific strategies to address each of the issues will be developed through consultation with the Ministry of Local Government, the Water Resources Authority, the Environmental Control Division (ECD) of the Ministry of Health and other related agencies such as Scientific Research Council and the University of the West Indies.

2.9 Does the country use constructed wetlands/ponds as wastewater treatment technology? SDG Target 6.3.1.

A=Yes

2.9 Additional Information

> The disposal of sewage effluent and sludge following treatment is now regulated by NEPA under the Natural Resources Conservation (Wastewater and Sludge) Regulations (gazetted in April 2013, under the NRCA Act). The Regulations make it mandatory for anyone who wishes to dispose of sewage sludge, or discharge trade or sewage effluent into rivers or the sea to have a licence. The issuing of licences enables NEPA to enforce operators to take samples of effluent and sludge at the end of the treatment process and ensure adequate operation and maintenance of treatment plants and is guided by 'Section 4: Minimum requirements for waste water treatment systems and excreta management in Jamaica'. The document speaks to the use of reed beds (constructed wetlands) for small and large sewage treatment and disposal systems. Pond systems are permitted by the Agency for use in large centralized systems.
(Source: Section 4 - Minimum requirements for waste water treatment systems and excreta management in Jamaica)

2.10 How do the country use constructed wetlands/ponds as wastewater treatment technology perform? SDG Target 6.3.1.

C=Functioning

2.10 Additional Information

> Generally the level of compliance for sewage treatment plants (STPs) operating in Jamaica has been on the decline 2010. In 2013, on average only one in four STPs met national standards. The agency of the government responsible with the delivery of potable water and operation of STP facilities has been slow in implementing plans to rehabilitate STPs. In 2013 the hotel sector has the best performance for compliance. Source: State of the Environment Report, Jamaica - 2013

2.11 How many centralised wastewater treatment plants exist at national level? SDG Target 6.3.1.

E=Exact number (plants)

> 209

2.11 Additional Information

> This accounts for the number of centralized wastewater treatment plants that have been licensed to operate in Jamaica.

2.12 How is the functional status of the wastewater treatment plants? SDG Target 6.3.1.

C=Functioning

2.12 Additional Information

> For the year 2016, monitoring data for one hundred and six (106) sewage treatment plants was presented.

The quality of effluent from forty-two percent of the sewage treatment plants were ranked as poor. Only 8.5% of the plants were ranked as having very good quality and 9.4% had good quality effluent. No distinction was made between centralized and decentralized plants (NEPA, 2017 – unpublished).

2.13 The percentage of decentralized wastewater treatment technology, including constructed wetlands/ponds is? SDG Target 6.3.1.

C=Functioning

2.13 Additional Information

> Refer to additional information provided in Section 5.6.

2.14 Is there a wastewater reuse system? SDG Target 6.3.1.

C=Partially

2.14 Additional Information

> The Natural Resources Conservation (Wastewater and Sludge) Regulation 2013 makes provision of the reuse of wastewater for irrigation purposes. A treatment plant operator shall not, without approval from the Authority use treated effluent for irrigation. If a License is granted for the reuse of wastewater for irrigation then the effluent shall meet the standards for listed in the Regulation. Specific standards for use for agricultural purposes may be prescribed in consultation with other relevant Agencies.

Source: The Natural Resources Conservation (Wastewater and Sludge) Regulation 2013.

2.15 What Is the purpose of the wastewater reuse system? SDG Target 6.3.1.

S=Landscape

2.15 Additional Information

Please indicate if the wastewater reuse system is for free or taxed or add any additional information.

> Please note that R (Agriculture) and T (Industrial) are also suitable responses.

Natural Resources Conservation (Wastewater and Sludge) Regulation 2013 makes provision for the collection of a discharge fee. The discharge is determined by the quality and volume of the discharge.

Target 3

Public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands. {1.10}

3.1 Is the private sector encouraged to apply the Ramsar wise use principle and guidance (Ramsar handbooks for the wise use of wetlands) in its activities and investments concerning wetlands? {1.10.1}

KRA 1.10.i

A=Yes

3.1 Additional Information

> Through the Natural Resources Conservation Authority (Permit and Licence) regulations 1996, developers are encouraged to minimize their environmental impact through the use of the 'wise use' principle. When impacts are expected in wetland areas then the granting of the Permit and Licence is contingent on the implementation of a mitigation plan that will seek to reduce the impact of the development as well as compensate for the resources to be impacted.

3.2 Has the private sector undertaken activities or actions for the conservation, wise use and management of {1.10.2} KRA 1.10.ii

Please select only one per square.

a) Ramsar Sites	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
b) Wetlands in general	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

3.2 Additional information

> This is usually achieved through the Natural Resources Conservation Authority (NRCA) Permit and Licence regulations where developers are required to conduct compensation measures in lieu of wetlands impacted. A recent example of this is the work proposed by the Kingston Freeport Terminal Limited (KFTL) in the Palisadoes-Port Royal Protected Area (including the Ramsar site). The company had conducted dredging activities in the Harbour in proximity to the Ramsar site. In response, the KFTL has partnered with relevant Agencies to implement conservation activities within the boundary of the protected area. These include the funding of an artificial reef structure and the restoration of a mangrove cay (an important bird habitat). The Sandals Foundation has worked on several environmental awareness projects over the triennium. Examples of these include the management of the Boscobel, Whitehouse Special Fishery Conservation Areas and an ongoing collaboration with the Bluefields Bay Fishermen's Friendly Society to facilitate monitoring and protection for marine turtles and their nesting beaches. Other hotel interests have lobbied for the declaration of additional SFCAs; one such collaboration has resulted in the declaration of the White River Special Fishery Conservation Areas. This is in partnership with local fisherfolks. The management of the area is entirely led through the partnership agreement.

3.3 Have actions been taken to implement incentive measures which encourage the conservation and wise use of wetlands? {1.11.1} KRA 1.11.i

D=Planned

3.3 Additional information

> During a series of consultations with relevant stakeholders to develop Jamaica's NBSAP 2016 - 2021 a number of gaps and challenges pertaining to the condition of marine and coastal biodiversity were identified. These included the need to create incentives to promote conservation by private land owners; it was suggested that this could be incorporated in the EIA process. It was also recommended that improved direct consultations with the private sector and special interest groups is needed when making decisions related to conservation of biodiversity.

As a national target, Jamaica is taking steps to introduce incentive programmes for private and public sector companies such as the Green Business Certification by 2019.

3.4 Have actions been taken to remove perverse incentive measures which discourage conservation and wise use of wetlands? {1.11.2} KRA 1.11.i

Z=Not Applicable

Target 4

Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.

4.1 Does your country have a comprehensive national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands? {1.9.1} KRA 1.9.i

A=Yes

4.1 Additional information

> The Jamaica Invasive Species Database, managed through Jamaica the Clearing-House Mechanism, details some of the species invasive to Jamaica, including their management strategy, invasive and habitat types and occurrence. The re-established National Invasive Alien Species Working Group, an inter-agency network for monitoring and overseeing IAS management in Jamaica has been working to evaluate other potentially invasive species for the expansion of the list.

4.2 Have national policies or guidelines on invasive species control and management been established or reviewed for wetlands? {1.9.2} KRA 1.9.iii

A=Yes

4.2 Additional information

> In 2013, Jamaica developed the National Invasive Alien Species Strategy and Action Plan (NIASSAP) which outlines management strategies for the control of invasive species. In 2012, the Special Fishery Conservation Areas (SFCAs) Regulations came into force. This allowed for authorized fishing with conditions to take place in former "fish sanctuaries" and newly declared SFCAs for activities such as research or the removal of invasive species.

The implementation of the Regional Project on Mitigating the Threats of Invasive Alien Species in the Insular Caribbean (MTIASIC) in 2009 - 2014 saw the development of Pet Trade Pathway Toolkit and the development of the Lionfish Management Plan. The campaign for lionfish control was also developed under the project. The campaign 'Eat it to beat it' is still ongoing as the country continues to detect lionfish in the marine environment.

4.3 How many invasive species are being controlled through management actions.

C=Partially

4.3 Additional information

If 'Yes', please indicate the year of assessment and the source of the information

> Research on freshwater species continues at the University of the West Indies in addition to periodic assessments conducted by NEPA. Jamaica's component of the regional project: Mitigating the Threat of Invasive Alien Species within the Insular Caribbean (MTIASIC) included a freshwater pilot project that looked at the impacts of the invasive alien plant species *Alpinia allughas* on the biodiversity of the Lower Black River Morass Ramsar site and on the regeneration of the swamp forest and determination of the most effective management treatment for the Paperbark Tree (*Melaleuca quinquenervia*).

NEPA entered at MOU with the IOJ, managers of the Mason River Protected Area, Bird Sanctuary and Ramsar Site to undertake the removal and control of the invasive fern *Dicranopteris pectinata* and replace two (2) acres of the Botanical Station/Protected Area with native plant species.

There is also the control of Lionfish in the marine environment (Eat it to beat it campaign). Responses to the Lionfish invasion have been encouraging since 2011. One of the main focus areas of the project was the training of fishermen on how to catch the fish, remove their poisonous spines (using protective gloves and shears) and on consuming the fish as an alternative to depleted stocks of commercial fish such as Snapper and Grunt. (Source: NBSAP 2016 - 2021).

4.4 Have the effectiveness of wetland invasive alien species control programmes been assessed?

C=Partially

4.4 Additional information

> The effectiveness of wetland invasive alien species control has not been formally assessed. Feedback on its effectiveness primarily comes from anecdotal evidence from fishermen who have benefited from various public awareness strategies and programmes under several grant funded projects. The feedback received suggests that the number of lionfish being caught in 2013 is at least 50% less than in 2010. Monitoring by University of the West Indies - Discovery Bay Marine Lab also confirms sightings are down and believes the main reason is the growing appetite of fishermen and the restaurant trade to consume the fish, especially on the North coast. Furthermore, some restaurants have developed specific dishes using Lionfish, which is proving popular with tourists and local residents.

Goal 2. Effectively conserving and managing the Ramsar Site network

Target 5

The ecological character of Ramsar Sites is maintained or restored through effective, planning and integrated management {2.1.}

5.1 Have a national strategy and priorities been established for the further designation of Ramsar Sites, using the Strategic Framework for the Ramsar List? {2.1.1} KRA 2.1.i

A=Yes

5.1 Additional information

> The Ramsar Information Sheet had been previously compiled for two locations in Jamaica: the St. Thomas Great Morass and Bowden wetland areas and the Negril Great Morass. There has been a recent proposal to the National Ramsar Committee for steps to be taken to enable the designation of the Negril Great Morass as Jamaica's 5th Ramsar site.

Currently NEPA's primary focus is the update of the Ramsar Information Sheet of its four declared Ramsar site on the Ramsar Sites Information Service platform. This is being done through consultations with relevant agencies and academia. This process is expected to continue until June 2018.

5.2 Are the Ramsar Sites Information Service and its tools being used in national identification of further Ramsar Sites to designate? {2.2.1} KRA 2.2.ii

A=Yes

5.2 Additional information

> The National Ramsar Committee has on its Agenda the expansion of one of the Ramsar sites. Work on this is still in its early stages but it involves the gathering of data to support the designation of the area and the submission of the requisite information on the Ramsar Sites Information Service.

5.3 How many Ramsar Sites have an effective, implemented management plan? {2.4.1} KRA 2.4.i

E=Exact number (sites)

> 0

5.4 For how many of the Ramsar Sites with a management plan is the plan being implemented? {2.4.2} KRA 2.4.i

E=Exact number (sites)

> 0

5.5 For how many Ramsar Sites is effective management planning currently being implemented (outside of formal management plans ? {2.4.3} KRA 2.4.i

E=Exact number (sites)

> 4

5.3 – 5.5 Additional information

> One output of the NPAS project (which was concluded over the past triennium) is the development and update of eight protected area management plans and business plans. This included the development of management plans for the Black River Proposed Landscape and the Palisadoes-Port Royal Protected Area and the Mason River Protected Area with all including a Ramsar Site.

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (through formal management plans where they exist or otherwise through existing actions for appropriate wetland management ? {1.6.2} KRA 1.6.ii

C=Partially

5.6 Additional information

> Over the past triennium an assessment is conducted using the Management Effectiveness Tracking Tool (METT) score to determine level of management effectiveness of the Natural Resources Conservation Authority Protected Areas (with includes the Ramsar site) for Mason River Protected Area, Bird Sanctuary and Ramsar Site, Palisadoes-Port Royal Protected Area. The Corporate Plan (2017 – 2020) of NEPA outlines key performance indicators and in specific reference to management plans and their effectiveness there are targets relating to a percentage increase in the METT scores for these areas. NEPA's Strategic Plan includes a target that calls for the increase in METT scores for 4 protected areas (including two Ramsar sites) by 25%. One component of the NPAS project aimed to deliver improvement in the protected areas METT scores. It was recognized that the METT Scorecard assessment was designed for use in terrestrial ecosystems. Analysis of aquatic protected areas was difficult for Protected Area managers and may not have been truly representative of the management effectiveness in those areas.

5.7 How many Ramsar Sites have a cross-sectoral management committee? {2.4.4} {2.4.6} KRA 2.4.iv

E=Exact number (sites)

> 2

5.7 Additional information

If at least 1 site, please give the name and official number of the site or sites

> The Mason River Protected Area, Bird Sanctuary & Ramsar Site (RPABS&RS) has a cross-sectoral management structure in two regards; by virtue of the designations and secondly because of its ownership status. The MRPABS&RS has four designations, three of which are evident by the name and the fourth is a designation as a National Heritage site by the Jamaica National Heritage Trust (JNHT). The four designations oblige the three entities (JNHT, NHMJ-IOJ, NEPA) to manage/monitor/protect etc. this area collaboratively as per the designations.

The Caribbean Coastal Area Management Foundation (C-CAM) had a management role in Portland Bight Protected Area (including the Ramsar Site) under a delegation agreement however the Urban Development Corporation is the owner of the lands. C-CAM however are developing a new management plan and continue to conduct aspects of PA management, research and fund raising.

5.8 For how many Ramsar Sites has an ecological character description been prepared (see Resolution X.15)? {2.4.5} {2.4.7} KRA 2.4.v

E=Exact number (sites)

> 4

5.8 Additional information

If at least 1 site, please give the name and official number of the site or sites

> Ramsar Information Sheets (RIS) were completed for all Ramsar sites and contributed to the designation of the site. The Black River Lower Morass (BRLMRS) updated RIS had previously submitted to the Ramsar Secretariat and the Palisadoes-Port Royal Ramsar Site RIS has been uploaded to the RSIS. The RIS sheet for Portland Bight has been updated by the relevant stakeholders and will be uploaded to the RSIS within six months. The MRPABS&RS RIS is due for update in 2018.

5.9 Have any assessments of the effectiveness of Ramsar Site management been made? {2.5.1} KRA 2.5.i
 C=Some Sites

5.9 Additional information

If 'Yes' or 'Some sites', please indicate the year of assessment, which assessment tool did you use (e.g. METT, Resolution XII.15, and the source of the information

> An assessment is conducted using the Management Effectiveness Tracking Tool (METT) score.
Refer to additional information provided in Section 5.6.

Target 7

Sites that are at risk of change of ecological character have threats addressed {2.6.}.

7.1 Are mechanisms in place for the Administrative Authority to be informed of negative human-induced changes or likely changes in the ecological character of Ramsar Sites, pursuant to Article 3.2? {2.6.1} KRA 2.6.i

A=Yes

7.1 Additional information

If 'Yes' or 'Some sites', please summarise the mechanism or mechanisms established

> The AA uses the National Ramsar Committee as a conduit of information from the NGO committee and the academia on the current state of threats to wetlands in general and Ramsar sites in particular. Further the AA has a hotline which allows members of the public, civil society and NGOs to report on and seek information about activities perceived to be likely to result in ecological changes within Ramsar sites.

In specific reference to MRPABS&RS there is in-person communication between NEPA's Environmental Officers (EOs) and NHMJ personnel at the site when NEPA's EOs visit for quarterly routine monitoring. Additionally there is electronic communication between NHMJ/IOJ and the AA if there are any major changes to be made to the site.

7.2 Have all cases of negative human-induced change or likely change in the ecological character of Ramsar Sites been reported to the Ramsar Secretariat, pursuant to Article 3.2? {2.6.2} KRA 2.6.i

C=Some Cases

7.2 Additional information

If 'Yes' or 'Some cases', please indicate for which Ramsar Sites the Administrative Authority has made Article 3.2 reports to the Secretariat, and for which sites such reports of change or likely change have not yet been made

> During the last triennium there has been some development within Ramsar sites however each development has been mandated to develop and implement a mitigation and compensation plan to reduce the impact on the site. This is in keeping with the wise-use guidelines of the Convention and striking the balance between economic growth and impact on natural resources. The developments in protected areas (including Ramsar sites) should not result in significant adverse ecological change of the sites. Any change will therefore be communicated in RIS updates.

7.3 If applicable, have actions been taken to address the issues for which Ramsar Sites have been listed on the Montreux Record, including requesting a Ramsar Advisory Mission? {2.6.3} KRA 2.6.ii

Z=Not Applicable

Goal 3. Wisely Using All Wetlands

Target 8

National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands {1.1.1} KRA 1.1.i

8.1 Does your country have a complete National Wetland Inventory? {1.1.1} KRA 1.1.i

C=In Progress

8.1 Additional information

> The World Bank funded project 'Assessment and Economic Valuation of Coastal Protection Services provided by Mangroves in Jamaica' which is to be implemented over the next triennium seeks to conduct a habitat status assessment and coastal protection ecosystem services assessment of three selected mangrove areas and using the data collected conduct habitat risk assessment and cost-effectiveness assessment.

The National Ramsar Committee has prioritized the compilation of available information on wetlands of Jamaica by inviting governmental organizations, NGOs and academia to submit the metadata on the Ramsar sites that they continue to target for research and management.

NEPA has in its repository shapefiles of the coverage of the following coastal ecosystems in Jamaica:

- a. seagrass beds
- b. mangrove forests
- c. coral reefs

This data is also augmented with the mapping of ecosystem services such as sea turtle nesting beaches and important bird habitats.

Partner Agencies such as C-CAM continues to conduct baseline surveys in fish sanctuaries within the PBPA including the Ramsar site.

8.2 Has your country updated a National Wetland Inventory in the last decade?

C=In Progress

8.2 Additional information

> In 2012-2013 the Forestry Department, with support from the European Union under the Climate Change Adaptation and Disaster Risk Reduction Project, conducted the: "Land Use Cover Assessment: A Comprehensive Assessment of Forest Change between 1998 and 2013" for Jamaica. The assessment used improved technology, based on a methodology of remote sensing, the collection of ground-truth data and cross-checking against archival land use data. The extent of mangrove forest is swamp/riparian forest was documented by the project.

Additionally, ongoing research by the University of the West Indies investigates the extent and state of wetlands.

8.3 Is wetland inventory data and information maintained? {1.1.2} KRA 1.1.ii

C=Partially

8.3 Additional information

> Wetland data is stored and readily available from the libraries of partner institutions such as the University of the West Indies (UWI), University of Technology (UTech), C-CAM, the Jamaica Clearing-house Mechanism hosted by NHMJ-IOJ. NEPA's Documentation Centre is a repository for wetland information as well as the Agency's D-Space Database.

Data is also made available from partner institutions mentioned in Sections 8.1 and 8.2.

8.4 Is wetland inventory data and information made accessible to all stakeholders? {1.1.2} KRA 1.1.ii

A=Yes

8.5 Has the condition* of wetlands in your country, overall, changed during the last triennium? {1.1.3}

Please describe on the sources of the information on which your answer is based in the free- text box below. If there is a difference between inland and coastal wetland situations, please describe. If you are able to, please describe the principal driver(s) of the change(s).

* 'Condition' corresponds to ecological character, as defined by the Convention

Please select only one per square.

a) Ramsar Sites	<input type="checkbox"/> N=Status Deteriorated <input checked="" type="checkbox"/> O=No Change <input type="checkbox"/> P=Status Improved
b) Wetlands generally	<input type="checkbox"/> N=Status Deteriorated <input checked="" type="checkbox"/> O=No Change <input type="checkbox"/> P=Status Improved

8.5 Additional information on a) and/or b)

> Development activities such as port and harbour development and expansion, agriculture, residential development and other economic developments are some of the activities that continues to impact Jamaica's wetlands. Land-based sources of pollution as well as nutrient loading are among the most prevalent issues facing wetlands. Anecdotal evidence also suggests that climatic change, specifically sea level rise and increased sea surface temperatures are exacerbating pre-existing pressures in and around wetland areas. Development within Ramsar sites has been mandated to develop and implement a mitigation and compensation plan to reduce the impact on the site and it is emphasized that developments in protected areas (including Ramsar sites) should not result in significant adverse ecological change of the site.

The World Bank funded project titled "Assessment and Economic Valuation of Coastal Protection Services Provided by Mangroves in Jamaica" will also conduct habitat status assessments to report on the status of wetlands generally in selected locations (project detailed in Section 2A).

8.6 Based upon the National Wetland Inventory if available please provide a baseline figure in square kilometres for the extent of wetlands (according to the Ramsar definition) for the year 2017. SDG Target 6.6

E=Exact Number (km2)

> 98

8.6 Additional information

If the information is available please indicate the % of change in the extent of wetlands over the last three years.
> In 2012-2013 the Forestry Department, with support from the European Union under the Climate Change Adaptation and Disaster Risk Reduction Project, conducted the: "Land Use Cover Assessment: A Comprehensive Assessment of Forest Change between 1998 and 2013" for Jamaica. The assessment used improved technology to the one conducted in 1998, based on a methodology of remote sensing, the collection of ground-truth data and cross-checking against archival land use data. The extent of mangrove forest is given as approximately 9,800 hectares and swamp/riparian forest as 100 hectares.

Marine/Coastal

*Mangrove forest: 98 km²; (9,800 ha)

+Coral reefs: 1,240 km²; (124,000 ha)

+Seagrass: 271.73 km²; (27,172.68 ha)

+Cays: 7.28 km²; (727.74 ha);

Total Area: 1,617 km²; (161,700 ha)

Inland

*Swamp/Riparian forest: 0.01 km²; (100 ha)

+Estuarine: 14.90 km²; (1,490.19 ha)

+Herbaceous wetlands*: 131.15 km²; (13,114.535 ha)

+Ponds & lakes: 6.35 km²; (635.20 ha)

Total Area: 152.4 km²; (152,239.93 ha)

Human-made

Man-made: unknown

Reference and dates:

*Land Cover Assessment conducted by the Forestry Department (2013)

+ Retrieved from GIS Unit National Spatial Branch: NEPA (Source: Ecological Working Group. (2009). Jamaica's National Ecological Gap Assessment Report: A Component of the Protected Areas System Master Plan of Jamaica.

The information for offshore banks has but been included in the total value. Offshore banks: 9441.83 km² (944,183.32 ha).

Target 9

The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone {1.3.}.

9.1 Is a Wetland Policy (or equivalent instrument) that promotes the wise use of wetlands in place? {1.3.1}
KRA 1.3.i

If 'Yes', please give the title and date of the policy in the green text box

C=In Preparation

9.1 Additional information

> Ministry of Economic Growth and Job Creation, NEPA and Environment and Risk Management has prioritized the finalization of the draft policy and legislation on protected area system for 2018. The policy titled .Draft Overarching Policy for Jamaica's System of Protected Areas' aims to enhance the contribution of economic sectors to the integrated management of coastal areas by developing awareness in sector line agencies and resource users. More importantly, the document will be a direction for planners and resource users in each of the economic sectors to take environmental impacts into account in plan formulation with particular emphasis on the consideration and inclusion of measures to facilitate Jamaica's adaption and overall resilience to climate change.

(Source: NBSAP 2016 - 2021).

The Protected Areas System Master Plan (PASMP) 2013 - 2017 aimed to develop a comprehensive and representative system of protected areas and a framework for management that supports national development. The PASMP sets out to ensure long-term viability by maintaining ecological processes and systems and protecting the country's natural and cultural heritage.

The Draft Overarching Policy for Jamaica's System of Protected Areas is an expression of Jamaica's commitment to protect the environment and its resources through the protection of parks and protected areas. The policy lists six goals which include, economic development, environmental conservation, sustainable use of resources, recreation and public education, public participation and financial sustainability. The policy is currently being reviewed.

9.2 Have any amendments to existing legislation been made to reflect Ramsar commitments?
{1.3.5}{1.3.6}

D=Planned

9.2 Additional information

> Refer to additional information provided in Section 9.1.

9.3 Do your country's water governance and management systems treat wetlands as natural water infrastructure integral to water resource management at the scale of river basins? {1.7.1} {1.7.2} KRA

1.7.ii

D=Planned

9.3 Additional information

> A draft Water Sector Policy has been developed and is being refined based on consultations with stakeholders. The policy articulates watershed management as a major strategy (including for floodwater control) and will elaborate aspects related to wetland conservation and rehabilitation as a means of ensuring water management, availability and security.

9.4 Have Communication, Education, Participation and Awareness (CEPA) expertise and tools been incorporated into catchment/river basin planning and management (see Resolution X.19)? {1.7.2}{1.7.3}

A=Yes

9.4 Additional information

> The Wondrous World of Wetlands activities are integrated in education in wetland communities. The Water Sector Policy is expected to include best practices including the CEPA tools as a part of the strategies to be implemented.

9.5 Has your country established policies or guidelines for enhancing the role of wetlands in mitigating or adapting to climate change? {1.7.3} {1.7.5} KRA 1.7.iii

C=Partially

9.5 Additional information

> The GoJ has acknowledged that climate change has to be mainstreamed in existing legislation and should be treated in the sector plan for Natural Resources and Environmental Management and Climate Change because of its many effects on natural resources. Sector plans for Poverty Reduction, Agriculture, Tourism and Natural Resources and Environmental Management and Hazard Risk Reduction and Climate Change are to be reviewed with climate change considerations.

The Jamaica National Climate Change Policy and Action Plan (JNCCPA) was finalized and submitted for approval by Cabinet as a matter of priority. The JNCCPA establishes the framework for mainstreaming climate change considerations in all areas of government. Policies to be revised to include climate change considerations are:

- Water Policy
- Forest Policy
- Ocean and Coastal Zone Management Policy
- Draft Overarching Policy for Jamaica's System of Protected Areas
- Coastal Management and Beach Restoration Guidelines: Jamaica

The NEPA Climate Change Response Strategy 2010-2015 if fully implemented would effectively mainstream climate change considerations for the main policies and plans falling within the responsibility of NEPA.

Regulations governing the use of wetlands and mangroves need to be strengthened to ensure that ecological buffers are protected as a priority. Filling of wetlands, damming of rivers, mining coral and beach sands, cutting of mangroves should be prohibited to preserve the natural storm abatement function of these areas.

9.6 Has your country formulated plans or projects to sustain and enhance the role of wetlands in supporting and maintaining viable farming systems? {1.7.4} {1.7.6} KRA 1.7.v

B=No

9.6 Additional information

> Over the past triennium, the Government of Jamaica through the Planning Institute of Jamaica (PIOJ) - national implementing entity - had secured grant funding from the Adaptation Fund for the implementation of adaptation measures and building resilience to climate change for livelihoods protection and food security. The programme, which began October 2012, is designed to contribute to building Jamaica's adaptive capacity. Two of the objectives of the programme were to:

- Enhancing climate resilience of the agricultural sector by improving water and land management
- Improving institutional and local level capacity for sustainable management of natural resources and in disaster risk reduction.

The project will also had the added benefit of improving agricultural activities to reduce watershed degradation (and by extension wetlands). Lessons learnt and best practices will also be shared with other communities (including within vicinity of wetlands) as a way of promoting sustainable practices.

9.7 Has research to inform wetland policies and plans been undertaken in your country on:

{1.6.1} KRA 1.6.i

Please select only one per square.

a) agriculture-wetland interactions	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> D=Planned
b) climate change	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> D=Planned
c) valuation of ecosystem services	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> D=Planned

9.7 Additional information

> Refer to additional information provided in Sections 9.5 and 2A.

9.8 Has your country submitted a request for Wetland City Accreditation of the Ramsar Convention, Resolution XII.10 ?

B=No

Target 10

The traditional knowledge innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels.

10.1 Have the guiding principles for taking into account the cultural values of wetlands including traditional knowledge for the effective management of sites (Resolution VIII.19) been used or applied?.(Action 6.1.2/ 6.1.6)

C=In Preparation

10.1 Additional information

> The cultural value of the Palisadoes-Port Royal Protected Area including the Ramsar site has been incorporated in management planning for the area. This has been achieved through surveys as well as the use of consultative and participatory methodologies during the development of management and zoning plans. These values are, as far as possible, integrated into the management and zoning plans developed. It should also be noted that NEPA has also developed policy guidelines on the use of participatory processes to guide management and the development of management and zoning plans. These guidelines are one tool which assists in ensuring that socio-economic and cultural values are considered through research and consultation with local communities.

10.2 Have case studies, participation in projects or successful experiences on cultural aspects of wetlands been compiled. Resolution VIII.19 and Resolution IX.21? (Action 6.1.6)

B=No

10.3 Have the guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands been used or applied. (Resolution VII. 8) (Action 6.1.5)

B=No

10.4 Traditional knowledge and management practices relevant for the wise use of wetlands have been documented and their application encouraged (Action 6.1.2)

B=No

Target 11

Wetland functions, services and benefits are widely demonstrated, documented and disseminated. {1.4.}

11.1 Has an assessment been made of the ecosystem benefits/services provided by Ramsar Sites and other wetlands? {1.4.1} KRA 1.4.ii

D=Planned

11.1 Additional information

If 'Yes' or 'Partially', please indicate, how many Ramsar Sites and their names

> A series of consultations with relevant stakeholders for the development of Jamaica's NBSAP 2016 – 2021 revealed additional gaps and challenges pertaining to the condition of marine and coastal biodiversity such as the need for training on the subject of environmental services valuation. Government Officers were trained in Natural Resources Valuation (NRV) Techniques (2010-2013) however as documented in the NBSAP it is the GoJ's intention to implement national projects using The Economics of Ecosystems and Biodiversity (TEEB) and System of Environmental-Economic Accounting (SEEB) approaches by 2020.

The World Bank Program on Forests titled "Assessment and Economic Valuation of Coastal Protection Services Provided by Mangroves in Jamaica". This project will consist of field data collection and analytical work towards Coastal Protection Ecosystem Services Assessment. Physical and socio-economic data in each coastal setting will be used to assess the current provision of ecosystem services related coastal protection by mangroves, and further calculate the hazard reduction by this ecosystem. Based on these calculations an economic value on these coastal protection services will be estimated (i.e. avoided losses: human lives, infrastructure damages, tourism economic loss, income loss, livelihoods).

11.2 Have wetland programmes or projects that contribute to poverty alleviation objectives or food and water security plans been implemented? {1.4.2} KRA 1.4.i

C=Partially

11.2 Additional information

> Refer to additional information provided Section 9.6.

11.3 Have socio-economic values of wetlands been included in the management planning for Ramsar Sites and other wetlands? {1.4.3}{1.4.4} KRA 1.4.iii

A=Yes

11.3 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> Global Coral Reef Monitoring Network (GCRMN) supports International Coral Reef Initiative (ICRI) by working through a global network to strengthen the provision of best available scientific information on and communication of the status and trends of coral reef ecosystems, for their conservation and management.

The GCRMN has developed a protocol intended to help reef managers understand the steps in a socioeconomic assessment, and provide practical guidelines on how to conduct baseline socioeconomic assessments of coral reef stakeholders. The step-by-step process in this manual can be used to assess the socioeconomic background of coral reef stakeholders. The social, cultural and economic issues are discussed as well as the organization and resource governance of coral reef management. The socioeconomic information collected and the processes suggested here will help reef managers in management, development, research, monitoring and policy at a site. The baseline information may also contribute to national, regional and international comparisons of data, which are useful for science and policy-making. Jamaica has benefited from two training workshops since 2016. The training targeted protected areas managers across the island including persons working in Ramsar sites and other wetlands.

11.4 Have cultural values of wetlands been included in the management planning for Ramsar Sites and other wetlands? {1.4.3}{1.4.4} KRA 1.4.iii

C=Partially

11.4 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> Refer to additional information provided in Sections 10.1 & 11.3.

Target 12

Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. {1.8.}

12.1 Have priority sites for wetland restoration been identified? {1.8.1} KRA 1.8.i

A=Yes

12.1 Additional information

> Over the next triennium the NEPA will be implementing the GEF funded 'Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWECO)' Project. The project is a regional project to be implemented in nine Caribbean islands. The project objective is to implement an integrated approach to water, land and ecosystem services management, supported by policy, institutional and legislative reforms and implementation of effective appropriate technologies to accelerate contribution to global targets on access to safe and reliable water supplies and improved sanitation and contributing to improved ecosystems function in the Caribbean. Jamaica's national project is titled Biodiversity Mainstreaming

in Coastal Landscapes within the Negril Environmental Protection Area of Jamaica will be implemented in the Negril Environmental Protection Area (Negril EPA). The three-fold overall goal of the national project is to a) realise the conservation of internationally significant wildlife biodiversity, (b) the restoration of wetland ecosystem services and (c) promote the sustainable use of wetland biological resources. The national project will specifically seek to (a) restore historical hydrological and other physical processes, (b) enhance and re-establish native vegetation communities to provide habitat to wetland fauna, (c) eliminate conflicts that degrade ecosystem functions, and (d) implement institutional arrangements to ensure the long-term sustainability of wetland biological resources. It is designed to have a multiplier effect throughout the larger community by (1) leveraging project resources to improve the heterogeneity of biodiversity and habitats and (2) improving access to biodiversity goods and services.

The Agency is in the early stages of a plan to conduct restoration activities of wetlands on parcels of lands at Winns Morass, Trelawny. Scope of work will involve the characterization of the forest composition, hydrological survey highlighting drainage and tidal features, and Enhancement of the ecology of the coastal environment.

12.2 Have wetland restoration/rehabilitation programmes, plans or projects been effectively implemented? {1.8.2} KRA 1.8.i

A=Yes

12.2 Additional information

If 'Yes' or 'Partially', please indicate, if available the extent of wetlands restored

> Over the past triennium the Government of Jamaica (GOJ)/European Union (EU)/United Nations Environmental Programme (UNEP) Climate Change Adaptation & Disaster Risk Reduction Project: Increasing Resilience of Coastal Ecosystems was implemented by the National Environment and Planning Agency (NEPA) and work was conducted within wetland protected areas island-wide. This included the ecological restoration of 6.7 ha of mangrove forests in the Portland Cottage and Hellshire areas within the Portland Bight Protected Area (PBPA) which includes the Portland Bight Wetlands and Cays Ramsar Site (PBW&C-RS). Despite the project coming to an end the Agency continued to monitor the effectiveness of the mangrove restoration undertaken within the Ramsar site. Information on the project was presented in a poster at the 2017 hosting of Gulf and Caribbean Fisheries Institute (GCFI) Conference.

Target 13

Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods

13.1 Have actions been taken to enhance sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands?

A=Yes

13.1. Additional information

If 'Yes', please indicate the actions taken

> Various sector policies are currently being reviewed to reflect environmental issues including climate change.

13.2 Are Strategic Environmental Assessment practices applied when reviewing policies, programmes and plans that may impact upon wetlands? {1.3.3} {1.3.4} KRA 1.3.ii

C=Partially

13.3 Are Environmental Impact Assessments made for any development projects (such as new buildings, new roads, extractive industry) from key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries that may affect wetlands? {1.3.4} {1.3.5} KRA 1.3.iii

A=Yes

13.3 Additional information

> The Permits and Licences System (P&LS) instituted by the GOJ governs the granting of licences for developments in the country. One such component of the P&LS incorporates an assessment to determine the applicability of the Environment Impact Assessment (EIA) tool as part of the decision-making process. Each development is evaluated against the rules governing the EIA assessment tool to determine whether the magnitude and the potential impacts of the project requires an EIA or in some cases an Environmental Impact Statement (EIS) or an Rapid Ecological Assessment (REA).

Goal 4. Enhancing implementation

Target 15

Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention. {3.2.}

15.1 Have you (AA) been involved in the development and implementation of a Regional Initiative under the framework of the Convention? {3.2.1} KRA 3.2.i

A=Yes

15.1 Additional information

If 'Yes' or 'Planned', please indicate the regional initiative(s) and the collaborating countries of each initiative
 > The Regional Initiative for Caribbean Wetlands - CaRIWet was submitted by Jamaica and Cuba on behalf of the contracting parties who are members of the Initiative. The Initiative was approved at the 40th Standing Committee of the Ramsar Convention (Ramsar, Irán, 1971). Jamaica continues to actively participate in CaRIWet with other other regional Contracting Parties which includes Cuba, St. Lucia, Bahamas, Trinidad and Tobago, Antigua and Barbuda, Belize, Dominican Republic, St. Vincent, Haiti, Guyana, Suriname, Netherlands and France.

15.2 Has your country supported or participated in the development of other regional (i.e., covering more than one country) wetland training and research centres? {3.2.2}

B=No

Target 16

Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness {4.1}

16.1 Has an action plan (or plans) for wetland CEPA been established? {4.1.1} KRA 4.1.i

Even if no CEPA plans have been developed, if broad CEPA objectives for CEPA actions have been established, please indicate this in the Additional information section below

Please select only one per square.

a) At the national level	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
b) Sub national level	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
c) Catchment/basin level	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
d) Local/site level	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned

16.1 Additional information

If 'Yes' or 'In progress' to one or more of the four questions above, for each please describe the mechanism, who is responsible and identify if it has involved CEPA NFPs

> Not since 2012. The AA has CEPA activities as a core function and the coordination of WWD activities are integrated into the workplan of NEPA officers. There is a CEPA committee established under the NRC with is primarily responsible for the planning and execution of activities in celebration of WWD. The committee also encourages all stakeholders/members to incorporate wetland education in all other outreach activities throughout the year working in areas under their responsibility.

16.2a How many centres (visitor centres, interpretation centres, education centres) have been established? {4.1.2} KRA 4.1.ii

a) at Ramsar Sites

E=Exact Number (centres)

> 1

16.2b How many centres (visitor centres, interpretation centres, education centres) have been

established? {4.1.2} KRA 4.1.ii

b) at other wetlands

E=Exact Number (centres)

> 0

16.2 Additional information

If centres are part of national or international networks, please describe the networks

> Over the past triennium C-CAM has worked to construct a Portland Bight Discovery Centre at Salt River in Clarendon within the Portland Bight Wetlands and Cays. This centre will become the focus of educational outreach to the public and will also cater to school groups. It will include boardwalks through the mangroves, a wildlife observation pond and boat tours of mangroves within the Salt River area. The main building will feature permanent and semi-permanent displays on wetland themes to educate and entertain visitors. Other facilities will include a conservation nursery primarily to help propagate vulnerable local plant species as part of a promoting "conservation gardening" to be implemented by C-CAM.

16.3 Does the Contracting Party {4.1.3} KRA 4.1.iii

Please select only one per square.

a) promote stakeholder participation in decision-making on wetland planning and management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
b) specifically involve local stakeholders in the selection of new Ramsar Sites and in Ramsar Site management?	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned

16.3 Additional information

If 'Yes' or 'Partially', please provide information about the ways in which stakeholders are involved

> Most submission relating to the wetland planning and management are through the National Ramsar Committee (NRC).

16.4 Do you have an operational cross-sectoral National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

A=Yes

16.4 Additional information

If 'Yes', indicate a) its membership; b) number of meetings since COP12; and c) what responsibilities the Committee has

> The National Ramsar Committee is comprised of members from governmental institutions such as the Administrative Authority (NEPA), the Ministry of Economic Growth & Job Creation (the Ministry with responsibility for the environment), Fisheries Division, Institute of Jamaica, Urban Development Corporation, Forestry Division, Ministry of Foreign Affairs and Foreign Trade, Social Development Commission; NGO's such as: Negril Area Environmental Protection Trust, Caribbean Coastal Area Management Foundation, The Nature Conservancy, St. Thomas Environmental Protection Association Benevolent Society, Portland Environmental Protection Association; Academia: University of the West Indies, College of Agricultural Science and Education and University of Technology; and experts in related fields. The NRC convenes quarterly meetings.

16.5 Do you have an operational cross-sectoral body equivalent to a National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

B=No

16.6 Are other communication mechanisms (apart from a national committee) in place to share Ramsar implementation guidelines and other information between the Administrative Authority and a), b) or c) below? {4.1.7} KRA 4.1.vi:

Please select only one per square.

--	--

a) Ramsar Site managers	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
b) other MEA national focal points	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
c) other ministries, departments and agencies	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned

16.6 Additional information

If 'Yes' or 'Partially', please describe what mechanisms are in place

> The AA and its parent Ministry are involved in a variety of other cross-sectoral committees through which information is shared and collaborative plans and approaches are implemented.

16.7 Have Ramsar-branded World Wetlands Day activities (whether on 2 February or at another time of year), either government and NGO-led or both, been carried out in the country since COP12? {4.1.8}

A=Yes

16.7 Additional information

> The AA has enshrined in its Operational Plan the annual hosting of activities commemorating World Wetland Day. Over the years there is one site that is highlighted as the focal point which is usually a Ramsar site, however activities are done at other areas by NGOs and supported by Government. The CEPA Committee spearheads the island-wide implementation of WWD activities and also compiles an annual report for submission to the National Ramsar Committee and the Ramsar Secretariat.

16.8 Have campaigns, programmes, and projects (other than for World Wetlands Day-related activities) been carried out since COP12 to raise awareness of the importance of wetlands to people and wildlife and the ecosystem benefits/services provided by wetlands? {4.1.9}

A=Yes

16.8 Additional information

If these and other CEPA activities have been undertaken by other organizations, please indicate this

> NEPA has a continuous programme in Portland Bight Protected Area and Cays and Palisadoes- Port Royal Protected Area which includes the Ramsar site. Activities that have been executed under the programme include the use of materials from the Birdsleuth curriculum in International Migratory Bird Day celebrations and students being taken to the wetland areas to view shore birds.

There is also participation in community meetings, water quality training, schools expo coordinated by Office of Disaster Preparedness and Emergency Management and the Jamaica National Heritage Trust.

The Agency also supports community festivals. NEPA has hosted cleanups, booth and community walk, door to door doing outreach to sensitize residents and patrons about the area. There is also sensitization with community stakeholders, including watersports operators.

NEPA, the AA, through the Crocodile Working Group hosted Jamaica's crocodile and friends conservation fair, "My Croc Adventure" in 2016. The Fair is one of a number of activities aimed at educating the Jamaican public about the importance of the American Crocodile (*Crocodylus acutus*), a key wetland species and other targeted species. Plans are underway for the hosting of another Fair in 2018.

Wetlands is integrated into the public education programmes of NEPA, other government agencies such as Urban Development Corporation (UDC), and Institute of Jamaica.

Through its 'Adopt-a-Beach' Programme schools, community groups and churches are encouraged to conduct clean-up of beaches located in areas across the island including Ramsar sites. This is more of a year long activity compared to International Coastal Clean-Up Day (ICCD) which is traditionally celebrated annually on the third Saturday of September. On this specially designated day, volunteers all around the world visit beaches and waterways to remove accumulated debris and other garbage. Many other entities also organize clean-up activities islandwide and this is supported by the private sector, public sector, community based organizations, NGOs, schools and the general public.

Target 17

Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available. {4.2.}

17.1a Have Ramsar contributions been paid in full for 2015, 2016 and 2017? {4.2.1} KRA 4.2.i

A=Yes

17.2 Has any additional financial support been provided through voluntary contributions to non-core funded Convention activities? {4.2.2} KRA 4.2.i

B=No

17.3 [For Contracting Parties with a development assistance agency only ('donor countries')]: Has the agency provided funding to support wetland conservation and management in other countries? {3.3.1} KRA 3.3.i

Z=Not Applicable

17.4 [For Contracting Parties with a development assistance agency only ('donor countries')]: Have environmental safeguards and assessments been included in development proposals proposed by the agency? {3.3.2} KRA 3.3.ii

Z=Not Applicable

17.5 [For Contracting Parties that have received development assistance only ('recipient countries')]: Has funding support been received from development assistance agencies specifically for in-country wetland conservation and management? {3.3.3}

A=Yes

17.5 Additional information

If 'Yes', please indicate from which countries/agencies since COP12

> Inter-American Development Bank (IDB), The World Bank, Global Environment Facility (GEF), United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), Tourism Enhancement Fund (TEF), German Development Bank, UN Environment International Environmental Technology Centre (ITC) through Japan Government Funding, Korean International Corporation Agency, and Adaptation Fund.

17.6 Has any financial support been provided by your country to the implementation of the Strategic Plan?

B=No

Target 18

International cooperation is strengthened at all levels {3.1}

18.1 Are the national focal points of other MEAs invited to participate in the National Ramsar/Wetland Committee? {3.1.1} {3.1.2} KRAs 3.1.i & 3.1.iv

A=Yes

18.1 Additional information

> The Convention on Biological Diversity (CBD) Focal Point participates as a member of National Ramsar Committee.

18.2 Are mechanisms in place at the national level for collaboration between the Ramsar Administrative Authority and the focal points of UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO)? {3.1.2} {3.1.3} KRA 3.1.iv

A=Yes

18.2 Additional information

> The AA, NEPA, has structured relationships with UNEP, UNFCCC, OAS and UNDP.

18.3 Has your country received assistance from one or more UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO) or the Convention's IOPs in its implementation of the Convention? {4.4.1} KRA 4.4.ii.

The IOPs are: BirdLife International, the International Water Management Institute (IWMI), IUCN (International Union for Conservation of Nature), Wetlands International, WWF and Wildfowl & Wetland Trust (WWT).

B=No

18.4 Have networks, including twinning arrangements, been established, nationally or internationally, for knowledge sharing and training for wetlands that share common features? {3.4.1}

B=No

18.5 Has information about your country's wetlands and/or Ramsar Sites and their status been made public (e.g., through publications or a website)? {3.4.2} KRA 3.4.iv

C=Partially

18.5 Additional information

> Through the Ramsar Information Sheets that are published on the Ramsar Sites Information Services website.

18.6 Has information about your country's wetlands and/or Ramsar Sites been transmitted to the Ramsar Secretariat for dissemination? {3.4.3} KRA 3.4.ii

A=Yes

18.6 Additional Information

> Ramsar Information Sheets are submitted to the Secretariat and are published on their website. Further there is the timely submission of Jamaica's National Reports to the Secretariat.

18.7 Have all transboundary wetland systems been identified? {3.5.1} KRA 3.5.i

Z=Not Applicable

18.8 Is effective cooperative management in place for shared wetland systems (for example, in shared river basins and coastal zones)? {3.5.2} KRA 3.5.ii

Y=Not Relevant

18.9 Does your country participate in regional networks or initiatives for wetland-dependent migratory species? {3.5.3} KRA 3.5.iii

A=Yes

18.9 Additional information

> Jamaica continues to participate in regional initiatives that are concerned with the recognition of the biological importance of transboundary wetland systems. These include the Western Hemispheric Migratory Species Initiative (WHMSI), BirdsCaribbean (formerly Society for the Conservation and Study of Caribbean Birds [SCSCB]) and sea turtle recovery networks such as WIDECAST.

Target 19

Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced.

19.1 Has an assessment of national and local training needs for the implementation of the Convention been made? {4.1.4} KRAs 4.1.iv & 4.1.viii

C=Partially

19.2 Are wetland conservation and wise-use issues included in formal education programmes?

C=Partially

19.2 Additional information

If you answer yes to the above please provide information on which mechanisms and materials

> Wetland conservation is a part of the outgoing Ministry of Education (MOE) GSAT curriculum for grades 5 and 6. The MOE is now moving to the Primary Exit Profile (PEP) curriculum which is not yet available. However, material was provided to MOE for use in the PEP curriculum.

It is also implemented in the public outreach program implemented by the Jamaica Environment Trust which is funded by the NRCA.

19.3a How many opportunities for wetland site manager training have been provided since COP12? {4.1.5} KRA 4.1.iv

a) at Ramsar Sites

E=Exact number (opportunities)

> 1

19.3b How many opportunities for wetland site manager training have been provided since COP12? {4.1.5} KRA 4.1.iv

b) at other wetlands

E=Exact number (Opportunities)

> 0

19.3 Additional information

including whether the Ramsar Wise Use Handbooks were used in the training

> See additional information in Section 11.3.

19.4 Have you (AA) used your previous Ramsar National Reports in monitoring implementation of the Convention? {4.3.1} KRA 4.3.ii

B=No

Section 4. Optional annex to allow any Contracting Party that has developed national targets to provide information on those

Goal 1

Target 1: Wetland benefits

Wetland benefits are featured in national / local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level. Contributes to Aichi Target 2

Target 1: Wetland benefits - Priority

A=High

Target 1: Wetland benefits - Resourcing

C=Limiting

Target 1: Wetland benefits - National Targets

> By 2021, at the latest, biodiversity values (including benefits of wetlands) have been integrated into national and local development and poverty reduction and planning processes and are being incorporated into national accounting as appropriate, and reporting systems.

Target 1: Wetland benefits - Planned activity

> • Implementation of national projects using The Economics of Ecosystems and Biodiversity and System of Environmental-Economic Accounting approaches.

- Environmental Management Policies/ Environmental Accounting by 2020.
- Update current legislations and policies relating to conservation and protection of biodiversity.
- Revise and/or develop fines for extractive industries; (renewable) marine fisheries (conch, lobster etc.), forestry and (non-renewable) mining (bauxite, limestone, sand, aggregate).
- Inclusion of natural capital into national budgets and priorities.

Target 2: Water Use

Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone. Contributes to Aichi Targets 7 and 8 and Sustainable Development Goal 6.3.1

Target 2: Water Use - Priority

B=Medium

Target 2: Water Use - Resourcing

C=Limiting

Target 2: Water Use - National Targets

> By 2021, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 2: Water Use - Planned activity

- > • Define and adopt Maintenance and Sustainability Strategy for identifying and assessing agriculture-dependent species in production systems.
- Assess, map and report the areas where the agricultural practices are sustainable.

Target 3: Public and private sectors

Public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands. {1.10}. Contributes to Aichi Targets 3, 4, 7 and 8.

Target 3: Public and private sectors - Priority

A=High

Target 3: Public and private sectors - Resourcing

C=Limiting

Target 3: Public and private sectors - National Targets

> By 2021, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant obligations, taking into account national socioeconomic conditions.

By 2021, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

By 2021, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

By 2021, pollution, including from excess nutrients and solid waste, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 3: Public and private sectors - Planned activity

> • Introduce incentive programmes to private and public sector companies such as the Green Business Certification.

• Develop new tools (manuals and/or smartphone apps), models and applications for various ecological assessments (Modelled after carbon footprint calculator).

• Promote and implement regulations to incentivise sustainable agricultural and forestry practices through the development of regulations and a supporting strategy.

• Monitor and report water quality in coastal waters and key freshwater resources based on National Water Quality Standards monitored.

• Updated assessment yearly and make connections to land based sources of pollution.

• Monitor and report the quality of industrial effluents from industries.

• Yearly monitoring and report the quality of domestic effluents from existing wastewater treatment plants.

Target 4: Invasive alien species

Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment. Contributes to Aichi Target 9.

Target 4: Invasive alien species - Priority

B=Medium

Target 4: Invasive alien species - Resourcing

B=Adequate

Target 4: Invasive alien species - National Targets

> By 2021, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 4: Invasive alien species - Planned activity

- > • Draft legislation for discharge, treatment and management of ballast water.
- Monitor and report on yearly existing invasive alien species potential hotspots (ports, marinas and harbours) using internationally recognized protocols.
- Develop strategy and action plan for control and management of all known invasive alien species.
- Draft regulations to improve management of invasive alien species.

Goal 2

Target 5: Ecological character of Ramsar Sites

The ecological character of Ramsar Sites is maintained or restored through effective, planning and integrated management {2.1.}. Contributes to Aichi Target 6,11, 12.

Target 5: Ecological character of Ramsar Sites - Priority

A=High

Target 5: Ecological character of Ramsar Sites - Resourcing

C=Limiting

Target 5: Ecological character of Ramsar Sites - National Targets

> By 2021, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective based conservation measures, and integrated into the wider landscapes and seascapes.

By 2021, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 5: Ecological character of Ramsar Sites - Planned activity

- > • Declare new fish sanctuaries for critical areas.
- Establish plan for reducing destructive fishing practices over a 10-year timeframe.
- Increase the number of fishing areas monitored.
- Prepare and implement a Management Plan for Commercial Fishery species by 2018 (List of target species to be developed and should include Irish moss, seagrass and Spirulina) (Sustainable extraction levels to be defined and recovery strategies for depleted species).
- Implement sustainable extraction practices as outlined in management plan.
- Assess and report on management effectiveness of existing network of protected areas.
- Policy and legislation on Protected Area System (PAS) finalized
- Measure coverage of both terrestrial and marine protected areas in relation to Jamaica's territory.
- Propose additional protected areas particularly for the marine environment since Jamaica has already exceeded the 17 % target for terrestrial ecosystems.
- Conduct and report on distribution assessments of selected key endangered and vulnerable species annually.
- Assess and correlate the distribution of selected key endangered and vulnerable species with the existing and proposed network of protected areas.

Target 7: Sites at risk

Sites that are at risk of change of ecological character have threats addressed {2.6.}. Contributes to Aichi Targets 5, 7, 11, 12.

Target 7: Sites at risk - Priority

A=High

Target 7: Sites at risk - Resourcing

C=Limiting

Target 7: Sites at risk - National Targets

> By 2021, at the latest, the rate of loss of natural habitats, including forests, is at least halved and where feasible, brought close to zero, and degradation and fragmentation is significantly reduced.

Target 7: Sites at risk - Planned activity

- > • Measure and report extent of all types of forests and wetlands (wet, mesic, dry limestone forest, riverine forest, shale forest, alluvial forest, montane cloud forest and swamp forest) by 2021.
- Assess and report habitat extent and fragmentation of each key habitat type.

Goal 3

Target 8: National wetland inventories

National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands {1.1.1} KRA 1.1.i. Contributes to Aichi Targets 12, 14, 18, 19.

Target 8: National wetland inventories - Priority

B=Medium

Target 8: National wetland inventories - Resourcing

C=Limiting

Target 8: National wetland inventories - National Targets

> By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, and local communities and the poor and vulnerable.

By 2020, the knowledge, the science base and technologies relating to biodiversity, its values, functioning, status, and trends, the consequences of its loss, are improved, widely shared and transferred and applied.

Target 8: National wetland inventories - Planned activity

- > • Develop national environmental management strategies.
- Develop a standard assessment tool and sensitise to different groups to report on the conservation status of the ecosystems they utilize and/or are charged with protecting.
- Increase the use of the CHM to disseminate information about the value of biodiversity including providing summarized abstracts to relevant studies by soliciting membership and conducting public awareness activities.
- Plan and host workshops and campaigns developed to build stakeholder awareness and buy-in to biodiversity conservation/protection.

Target 9: Wise Use

The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone {1.3.}. Contributes to Aichi Targets 4, 6, 7.

Target 9: Wise Use - Priority

B=Medium

Target 9: Wise Use - Resourcing

C=Limiting

Target 9: Wise Use - National Targets

> By 2021, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 9: Wise Use - Planned activity

> Assess and report the list of existing agriculture-dependent species in production systems and highlight the 10 most relevant species.

Target 10: Traditional Knowledge

The traditional knowledge innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels. Contributes to Aichi Target 18.

Target 10: Traditional Knowledge - Priority

B=Medium

Target 10: Traditional Knowledge - Resourcing

C=Limiting

Target 10: Traditional Knowledge - National Targets

> By 2021, the traditional knowledge, innovations and practices of local communities and indigenous people relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of local communities, at all relevant levels.

Target 10: Traditional Knowledge - Planned activity

- > • Develop an inventory or status report that documents traditional knowledge and cultural practices linked to biodiversity.
- Develop legislation and regulations that protect/govern traditional knowledge and cultural practices linked to biodiversity.
- Drafting and preparation of document for signed agreement between local communities and government for access, benefit sharing and traditional knowledge on biodiversity.

Target 11: Wetland functions

Wetland functions, services and benefits are widely demonstrated, documented and disseminated. {1.4.}.
Contributes to Aichi Targets 1, 2, 13, 14.

Target 11: Wetland functions - Priority

B=Medium

Target 11: Wetland functions - Resourcing

C=Limiting

Target 11: Wetland functions - National Targets

> By 2021, at the latest, people are aware of the values of biodiversity (including wetland species) and the steps they can take to conserve and use it sustainably.

Target 11: Wetland functions - Planned activity

- > • Implement comprehensive national strategies into various sectors to promote awareness of the values of biodiversity (industry/sector-specific information and guidelines).
- Conduct public awareness campaigns on biodiversity and identify steps people can take to protect it.

Target 12: Restoration

Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. {1.8.}.
Contributes to Aichi Targets 14 and 15.

Target 12: Restoration - Priority

A=High

Target 12: Restoration - Resourcing

C=Limiting

Target 12: Restoration - National Targets

> By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, and local communities and the poor and vulnerable.

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, hereby contributing to climate change mitigation and adaptation and to combating desertification.

Target 12: Restoration - Planned activity

- > • Implement conservation measures in vulnerable/sensitive ecosystem areas to restore 5% of those vulnerable.
- Develop and implement a National Plan for Ecosystem Restoration.
- Compile, generate and review information on the potential contribution of biodiversity and the maintenance of ecosystem services to resilience and adaptive capacity in the face of impacts from climate change. This information is used to address climate change policies that impact biodiversity including to people.
- Develop appropriate tools for ecosystem restoration by specialist.
- Integrate ecosystem restoration into national adaptation strategies (including REDD-plus).

Target 13: Enhanced sustainability

Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods. Contributes to Aichi Targets 6 and 7.

Target 13: Enhanced sustainability - Priority

A=High

Target 13: Enhanced sustainability - Resourcing

C=Limiting

Target 13: Enhanced sustainability - National Targets

> By 2021, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

By 2021, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 13: Enhanced sustainability - Planned activity

- > • Monitor and report fishing production (tonnage produced/target species).
- Monitor and report on extraction rates of commercial fisheries species.
- Assess and report on the location and population status of at least 10 agriculture-dependent species.

Goal 4

Target 15: Regional Initiatives

Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention. {3.2.}

Target 15: Regional Initiatives - Priority

A=High

Target 15: Regional Initiatives - Resourcing

C=Limiting

Target 15: Regional Initiatives - National Targets

> By 2020, the mobilization of resources for the effective support of the Caribbean Regional Initiative on Wetlands (CARIWET) towards the effective implementation of the workplan agreed upon by the Caribbean Contracting Parties to the Convention.

Target 15: Regional Initiatives - Planned activity

> • Continued endorsement of the Regional Initiative and the incorporation of the Initiative's workplan into the workplan of relevant agencies.

Target 16: Wetlands conservation and wise use

Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness {4.1}. Contributes to Aichi Target 1 and 18.

Target 16: Wetlands conservation and wise use - Priority

B=Medium

Target 16: Wetlands conservation and wise use - Resourcing

B=Adequate

Target 16: Wetlands conservation and wise use - National Targets

> By 2021, at the latest, people are aware of the values of biodiversity (including wetland species) and the steps they can take to conserve and use it sustainably.

By 2021, the traditional knowledge, innovations and practices of local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations.

Target 16: Wetlands conservation and wise use - Planned activity

- > • Conduct baseline - KAP survey including gender to facilitate gender sensitive data.
- Develop the relevant educational curricula relating to aspects of biodiversity to be implemented in schools.
- Include the status and practices of traditional occupations that depend on or impact biodiversity resources in the State of the Environment Report (SOE).

Target 17: Financial and other resources

Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available. {4.2.}. Contributes to Aichi Target 20.

Target 17: Financial and other resources - Priority

A=High

Target 17: Financial and other resources - Resourcing

C=Limiting

Target 17: Financial and other resources - National Targets

> By 2019, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2016–2021 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

Target 17: Financial and other resources - Planned activity

- > • Develop a National Strategy for Resource Mobilization. Draft should include combined international domestic mobilization (funding, human resources and capacity building).
- Develop a national external funding strategy for biodiversity conservation drawing from related funding sources and international agreements (UNFCCC, CBD, etc.) with the aim to increase the number of funding sources.

Target 18: International cooperation

International cooperation is strengthened at all levels {3.1}

Target 18: International cooperation - Priority

A=High

Target 18: International cooperation - Resourcing

B=Adequate

Target 18: International cooperation - National Targets

> By 2021, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant obligations, taking into account national socioeconomic conditions.

By 2020, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational consistent with national legislation.

Target 18: International cooperation - Planned activity

- > • Incentives implemented to harmonize with The CBD and other relevant international obligations.
- Ongoing review of ABS agreements to examine ecological, social and economic impacts of different products (marine products etc.) and the national access and benefit sharing plan (ABS).

Target 19: Capacity Building

Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced. Contributes to Aichi Targets 1 and 17.

Target 19: Capacity Building - National Targets

> By 2019, each party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 19: Capacity Building - Planned activity

> Integrate NBSAP (including national targets for wetland management) into agencies' work plans, namely, Forestry Department., Fisheries Division, National Environment & Planning Agency, and relevant Ministries (including the Ministries with responsibility for Tourism, Science Energy and Technology, Agriculture, Economic Growth, Job Creation and Finance).

